

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-97 (cancelled).

98. (Previously presented) An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding a polypeptide comprising amino acids from about -51 to about 360 in SEQ ID NO:2;

(b) a nucleotide sequence encoding a polypeptide comprising amino acids from about -50 to about 360 in SEQ ID NO:2;

(c) a nucleotide sequence encoding a polypeptide comprising amino acids from about 1 to about 360 in SEQ ID NO:2;

(d) a nucleotide sequence encoding a polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97920;

(e) a nucleotide sequence encoding the mature DR5 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97920;

(f) a nucleotide sequence encoding the DR5 extracellular domain;

(g) a nucleotide sequence encoding the DR5 transmembrane domain;

(h) a nucleotide sequence encoding the DR5 intracellular domain;

- (i) a nucleotide sequence encoding the DR5 death domain; and
- (j) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e), (f), (g), (h), or (i) above.

99. (Previously presented) The nucleic acid molecule of claim 98, comprising the nucleotide sequence in SEQ ID NO:1.

100. (Previously presented) An isolated nucleic acid molecule comprising a polynucleotide sequence which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to the nucleotide sequence in (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j) of claim 98, wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only adenosine nucleotides or of only thymidine nucleotides.

101. (Previously presented) An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a DR5 polypeptide having an amino acid sequence in (a), (b), (c), (d), (e), (f), (g), (h), or (i) of claim 98.

102. (Previously presented) The isolated nucleic acid molecule of claim 101, which encodes an epitope-bearing portion of a DR5 polypeptide selected from the group consisting of: a polypeptide comprising amino acids from about 11 to about 59 in SEQ

ID NO:2; a polypeptide comprising amino acids from about 68 to about 113 in SEQ ID NO:2; a polypeptide comprising amino acids from about 173 to about 220 in SEQ ID NO:2; and a polypeptide comprising amino acids from about 224 to about 319 in SEQ ID NO:2.

103. (Previously presented) A method for making a recombinant vector comprising inserting the nucleic acid molecule of claim 98 into a vector.

104. (Previously presented) A method of making a recombinant host cell comprising introducing the isolated nucleic acid molecule of claim 98 into a host cell:

105. (Previously presented) A method for producing a DR5 polypeptide, comprising culturing the recombinant host cell produced by the method of claim 104 under conditions such that said polypeptide is expressed, and recovering said polypeptide.

106. (Previously presented) An isolated DR5 polypeptide comprising an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:

- (a) amino acids from about -51 to about 360 in SEQ ID NO:2;
- (b) amino acids from about -50 to about 360 in SEQ ID NO:2;
- (c) amino acids from about 1 to about 360 in SEQ ID NO:2;
- (d) the amino acid sequence of the DR5 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97920;

- (e) the amino acid sequence of the mature DR5 polypeptide having the amino acid encoded by the cDNA clone contained in ATCC Deposit No. 97920;
- (f) the amino acid sequence of the DR5 extracellular domain;
- (g) the amino acid sequence of the DR5 transmembrane domain;
- (h) the amino acid sequence of the DR5 intracellular domain;
- (i) the amino acid sequence of the DR5 death domain; and
- (j) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), (e), (f), (g), (h), or (i).

107. (Previously presented) An isolated polypeptide comprising an epitope-bearing portion of the DR5 protein, wherein said portion is selected from the group consisting of: a polypeptide comprising amino acids from about 11 to about 59 in SEQ ID NO:2; a polypeptide comprising amino acids from about 68 to about 113 in SEQ ID NO:2; a polypeptide comprising amino acids from about 173 to about 220 in SEQ ID NO:2; and a polypeptide comprising amino acids from about 224 to about 319 in SEQ ID NO:2.

108. (Previously presented) A pharmaceutical composition comprising the polypeptide of claim 106 and a pharmaceutically acceptable carrier.

109. (Previously presented) A fusion protein comprising the polypeptide of claim 106 fused to a heterologous polypeptide.

110. (Previously presented) An isolated antibody or fragment thereof that binds specifically to a DR5 polypeptide consisting essentially of a sequence selected from the group consisting of:

- (a) amino acids from about -51 to about 360 in SEQ ID NO:2;
- (b) amino acids from about -50 to about 360 in SEQ ID NO:2;
- (c) amino acids from about 1 to about 360 in SEQ ID NO:2;
- (d) the amino acid sequence of the DR5 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97920;
- (e) the amino acid sequence of the mature DR5 polypeptide having the amino acid encoded by the cDNA clone contained in ATCC Deposit No. 97920;
- (f) the amino acid sequence of the DR5 extracellular domain;
- (g) the amino acid sequence of the DR5 transmembrane domain;
- (h) the amino acid sequence of the DR5 intracellular domain;
- (i) the amino acid sequence of the DR5 death domain; and
- (j) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), (e), (f), (g), (h) or (i).

111. (Previously presented) The antibody or fragment thereof of claim 110 which is selected from the group consisting of:

- (a) a polyclonal antibody;
- (b) a monoclonal antibody;
- (c) an F(ab')₂ fragment; and
- (d) an Fab fragment.

112. (Previously presented) An isolated cell that produces the antibody or fragment thereof of claim 110.

113. (Previously presented) A pharmaceutical composition comprising the antibody or fragment thereof of claim 110 and a pharmaceutically acceptable carrier.

114. (Previously presented) An isolated antibody or fragment thereof which is an agonist of a DR5 polypeptide consisting essentially of a sequence selected from the group consisting of:

- (a) amino acids from about -51 to about 360 in SEQ ID NO:2;
- (b) amino acids from about -50 to about 360 in SEQ ID NO:2;
- (c) amino acids from about 1 to about 360 in SEQ ID NO:2;
- (d) the amino acid sequence of the DR5 polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97920;
- (e) the amino acid sequence of the mature DR5 polypeptide having the amino acid encoded by the cDNA clone contained in ATCC Deposit No. 97920;
- (f) the amino acid sequence of the DR5 extracellular domain; and
- (g) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), (e) or (f).

115. (Previously presented) The antibody or fragment thereof of claim 114 which is selected from the group consisting of:

- (a) a polyclonal antibody;
- (b) a monoclonal antibody;
- (c) an F(ab')₂ fragment; and
- (d) an Fab fragment.

116. (Previously presented) An isolated cell that produces the antibody or fragment thereof of claim 114.

117. (Previously presented) A pharmaceutical composition comprising the antibody or fragment thereof of claim 114 and a pharmaceutically acceptable carrier.

118. (Previously presented) An isolated antibody or fragment thereof capable of binding to a DR5 protein expressed on the surface of a cell comprising the human cDNA contained in ATCC Deposit No. 97920 operably associated with a regulatory sequence that controls the expression of said polynucleotide.

119. (Previously presented) An isolated antibody or fragment thereof capable of binding to a DR5 protein expressed on the surface of a cell comprising the human cDNA contained in ATCC Deposit No. 97920 operably associated with a regulatory sequence that controls the expression of said polynucleotide, wherein said antibody or fragment thereof is an agonist of said DR5 protein.

120. (New) An isolated DNA which encodes a fragment of the polypeptide of SEQ ID NO:2, wherein said fragment binds TRAIL.

121. (New) The isolated DNA of claim 120, wherein said fragment is a soluble fragment of said polypeptide.

122. (New) An isolated DNA which encodes a polypeptide comprising an amino acid sequence that is at least 80% identical to the amino acid sequence presented in SEQ ID NO: 2; wherein said polypeptide binds TRAIL.

123. (New) The isolated DNA of claim 122 wherein said polypeptide comprises an amino acid sequence that is at least 90% identical to the amino acid sequence presented in SEQ ID NO: 2.

124. (New) An expression vector comprising the DNA of claim 120.

125. (New). An expression vector comprising the DNA of claim 121.

126. (New) An expression vector comprising the DNA of claim 122.

127. (New) A host cell transformed with the expression vector of claim 124.

128. (New) A host cell transformed with the expression vector of claim 125.

129. (New) A host cell transformed with the expression vector of claim 126.

130. (New) An isolated DNA comprising a nucleotide sequence that is at least 80% identical to the nucleotide sequence presented in SEQ ID NO:1, wherein said DNA encodes a polypeptide that binds TRAIL.

131. (New) The isolated DNA of claim 130 comprising a nucleotide sequence that is at least 90% identical to the nucleotide sequence presented in SEQ ID NO: 1.

132. (New) An isolated DNA encoding a soluble polypeptide comprising an amino acid sequence that is at least 80% identical to the amino acid sequence of the DR5 extracellular domain, wherein said polypeptide binds TRAIL.

133. (New) An isolated DNA encoding a fusion protein comprising an immunoglobulin Fc region and a soluble polypeptide fragment of the protein of SEQ ID NO:2, wherein said soluble polypeptide fragment binds TRAIL.

134. (New) An isolated DNA encoding a fusion protein comprising an immunoglobulin Fc region and a soluble polypeptide, wherein said soluble polypeptide has an amino acid sequence that is at least 80% identical to the amino acid sequence of the DR5 extracellular domain, and wherein said soluble polypeptide binds TRAIL.

135. (New) An expression vector comprising the DNA of claim 130.

136. (New) An expression vector comprising the DNA of claim 131.

137. (New) An expression vector comprising the DNA of claim 132.

138. (New) An expression vector comprising the DNA of claim 133.

139. (New) An expression vector comprising the DNA of claim 134.

140. (New) A process for preparing a polypeptide, said process comprising culturing a host cell transformed with the vector of claim 135 under conditions that promote expression of said polypeptide, and recovering said polypeptide.

141. (New) A process for preparing a polypeptide, said process comprising culturing a host cell transformed with the vector of claim 136 under conditions that promote expression of said polypeptide, and recovering said polypeptide.

142. (New) A process for preparing a polypeptide, said process comprising culturing a host cell transformed with the vector of claim 137 under conditions that promote expression of said polypeptide, and recovering said polypeptide.

143. (New) A process for preparing a fusion protein, said process comprising culturing a host cell transformed with the vector of claim 138 under conditions that promote expression of said fusion protein, and recovering said fusion protein.

144. (New) A process for preparing a polypeptide, said process comprising culturing a host cell transformed with the vector of claim 139 under conditions that promote expression of said polypeptide, and recovering said polypeptide.